

The utility of portable Fourier transform infrared spectroscopy (FTIR) in the survey of modern and contemporary paintings and painted objects

A joint presentation by the Museum Conservation Institute and the Anacostia Community Museum



On-site paint binder analysis with FTIR. *Portrait of Frederick Douglass* by Simmie Knox, 1975, Anacostia Community Museum collections

The Anacostia Community Museum (ACM) houses many modern and contemporary works of art produced with modern paints. These media are sensitive to solvents and heat, are inherently less stable and can quickly show signs of deterioration creating substantial dilemmas for art conservators. Because traditional preservation techniques are often inappropriate for modern paintings, one key to successful preservation is to identify the paint media used, indicating how the artworks should be cared for, handled and stored. Misidentification of the paint media can cause the wrong conservation treatment to be selected leading to irreversible damage to the artwork. Thus, innovative technologies for analyzing complex paint media play an important role in the proper care of ACM's modern and contemporary art collections.

Since 2007, staff members of MCI and ACM have worked cooperatively on the conservation and care of the museum's collection. In 2011, ACM and MCI began a collaborative survey of modern and contemporary paintings and painted objects in ACM's fine art collection. Funding from the Collection Care and Preservation Fund facilitated the survey, preservation and the acquisition of a portable hand-held FTIR spectrometer to identify paint media. The portable FTIR's simplicity, speed, selectivity, and non-invasive analysis have made it ideal for the ACM survey. MCI scientists and conservators have worked closely with the ACM curator, collection manager, and contract conservators to design and implement this project. All involved in the survey have benefited from the systematic visual and scientific evaluation of paint media. This project has led to detailed discussions on the optimal care of the museum's collections. When the ACM/MCI survey is completed, the portable FTIR spectrometer will be housed and maintained by MCI and made available for future collection surveys at the Smithsonian Institution.

The presentation will cover the process of incorporating scientific data into the survey's work flow and collection management system, the visual and scientific examination of complex modern paint media, and the interpretation of FTIR data. A hands-on demonstration of the portable FTIR spectrometer will immediately follow the presentation. Guests are welcome to bring samples to use in testing the FTIR.

MCI

*Topics in
Museum
Conservation*

**August 20, 2012
10:45 am
Monday**

MCI Theater

MUSEUM SUPPORT CENTER

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Smithsonian
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